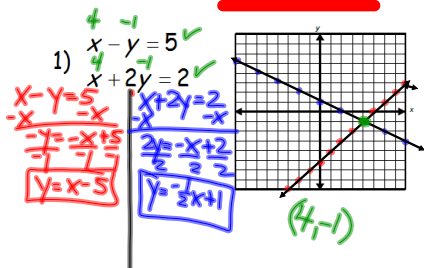


Solve by using the graphing method.



3.2 Solving Systems by Elimination

Use elimination to solve each system of equations.
 Check your solution.

1. $\begin{cases} x - y = -3 \\ x + y = 5 \end{cases}$ 2. $\begin{cases} x + 3y = 6 \\ x - y = 2 \end{cases}$

3. $\begin{cases} 7x - 3y = 32 \\ 2x + y = 11 \end{cases}$ $(5, 1)$

$7x - 3y = 32$
 $6x + 3y = 33$
 $3x = 65$
 $x = 5$

$2(5) + y = 11$
 $10 + y = 11$
 $y = 1$

4. $\begin{cases} 2x - 4y = 8 \\ -2x + 5y = 23 \end{cases}$ $(-4, 3)$

$2x - 4y = 8$
 $-2x + 5y = 23$
 $13y = 31$
 $y = 3$

$x + 4(3) = 8$
 $x + 12 = 8$
 $x = -4$

5. $\begin{cases} 2x - 5y = 11 \\ -x + 3y = -7 \end{cases}$ $(-2, -3)$

$2x - 5y = 11$
 $-2x + 6y = -14$
 $y = -3$

$-x + 3(-3) = -7$
 $-x - 9 = -7$
 $-x = 2$
 $x = -2$

6. $\begin{cases} 3x - 2y = -4 \\ 4x + y = -5 \end{cases}$

7. $\begin{cases} 3x - 4y = 7 \\ -6x + y = -7 \end{cases}$ 8. $\begin{cases} 8x + 5y = -28 \\ -3x + 2y = -5 \end{cases}$

Classify each system as consistent or inconsistent, independent or dependent. If the system is consistent, find the solution.

9. $\begin{cases} x + 7y = 13 \\ -x - 7y = -7 \end{cases}$ 10. $\begin{cases} 2x - y = 18 \\ 10x - 5y = 90 \end{cases}$

11. $\begin{cases} 2x + 7y = -4 \\ -x - 8y = 2 \end{cases}$ 12. $\begin{cases} x + y = 1 \\ x - 3y = -23 \end{cases}$

13. $\begin{cases} 4x - 3y = 15 \\ 12x - 9y = 36 \end{cases}$ 14. $\begin{cases} 2x - 7y = -1 \\ 6x - 21y = -3 \end{cases}$

15. $\begin{cases} 3x - 5y = 16 \\ -x + 4y = -10 \end{cases}$ $(2, -2)$

$3x - 5y = 16$
 $-3x + 12y = -30$
 $7y = -14$
 $y = -2$

$-x + 4(-2) = -10$
 $-x - 8 = -10$
 $-x = -2$
 $x = 2$

16. $\begin{cases} 7x + 14y = 21 \\ x + 2y = 3 \end{cases}$



Practice

3.2 Solving Systems by Elimination

Use elimination to solve each system of equations.
Check your solution.

1. $\begin{cases} -2x + 9y = -13 \\ 6x - 3y = 15 \end{cases}$

2. $\begin{cases} \frac{2}{3}x - 3y = \frac{5}{3} \\ 2x - 9y = 4 \end{cases}$

3. $\begin{cases} 7y - x = 8 \\ x - y = 4 \end{cases}$

4. $\begin{cases} 4x + y = 12 \\ 3x + \frac{1}{4}y = 9 \end{cases}$

5. $\begin{cases} 5x + 9y = -7 \\ 2x + 3y = -1 \end{cases}$

6. $\begin{cases} \frac{1}{2}x + y = 22 \\ 2x + 4y = 11 \end{cases}$

7. $\begin{cases} \frac{2}{3}x - y = -2 \\ 3x + 2y = -35 \end{cases}$

8. $\begin{cases} 6x - y = 26 \\ 3x - \frac{1}{2}y = 13 \end{cases}$

9. $\begin{cases} \frac{1}{2}x + \frac{3}{4}y = 10 \\ 2x - y = 8 \end{cases}$

15. $\begin{cases} \frac{2}{3}x - 3y = \frac{5}{3} \\ 2x - 9y = 4 \end{cases}$
 $\begin{aligned} 10x - 45y &= 3 \\ -2x + 9y &= 4 \\ \hline 8x - 36y &= 7 \end{aligned}$
 $\begin{aligned} 10x - 45y &= 3 \\ -2x + 9y &= 4 \\ \hline -10x + 45y &= -20 \\ \hline 0 &= -17 \end{aligned}$

10. $\begin{cases} x - 9y = -13 \\ 2x + y = -7 \end{cases}$

11. $\begin{cases} 13x + 7y = 19 \\ 9x - 2y = 20 \end{cases}$

12. $\begin{cases} 5x + 2y = -9 \\ y - 3x = 12 \end{cases}$

13. $\begin{cases} 11x - 4y = 19 \\ 3x - 2y = 7 \end{cases}$

14. $\begin{cases} 3x - 2y = 31 \\ 3x + 2y = -1 \end{cases}$

15. $\begin{cases} 3x + 5y = 4 \\ 5x + 7y = 6 \end{cases}$

Use Substitution to solve each system of linear equations.
Check your solution.

16. $\begin{cases} y = 3x + 2 \\ y = 2x + 5 \end{cases}$

17. $\begin{cases} y = 6x \\ 2x + 5y = 16 \end{cases}$

18. $\begin{cases} 4x + y = 9 \\ 2y = -8x + 18 \end{cases}$

HW

Solving Systems of Equations Review

Quiz Thursday on 3.1 and 3.2